## ABSTRACT OF THE DISCLOSURE

The invention provides a suspension control apparatus for a vehicle which can execute a suspension control suitable even for a rough road by executing the suspension control based on an actual road surface profile, while taking various vehicle states (weight, speed, etc.) into consideration, and learning the road surface profile. The suspension control apparatus has a vertical acceleration sensor for detecting a vertical acceleration of the vehicle, and a control unit for determining a road surface profile by estimating waves and irregularities in the road surface based on the vertical acceleration of the vehicle detected by the vertical acceleration sensor, and determining a suspension control value based on the thus determined road surface profile.